

AIR QUALITY PERMIT

Issued To: SemMaterials, L.P.
Billings Emulsion Plant
7315 Mossmain Lane
Billings, MT 59106

Permit: #3866-00
Application Complete: 09/11/06
Preliminary Determination Issued: 10/16/06
Department's Decision Issued: 11/01/06
Permit Final: 11/17/06
AFS: #111-0038

An air quality permit, with conditions, is hereby granted to SemMaterials, L.P. (SemMaterials), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Permitted Equipment

SemMaterials owns and operates an asphalt emulsion terminal. Primary terminal activities include receiving and storage of asphalt cement (AC), asphalt additives, and number 2 fuel oil; production and storage of asphalt emulsions (AE) and emulsion cutback (EC); loading of trucks with AC, AE, and EC; operation of a thermal oil heat transfer system; and associated cleaning and maintenance activities. A complete list of permitted equipment is contained in Section I of the permit analysis.

B. Plant Location

The SemMaterials facility is located at 7315 Mossmain Lane, Billings, Montana 59106. The legal description of the site is Section 1, Township 2 South, Range 24 East, in Yellowstone County, Montana. The UTM Coordinates of the site are Zone 12, 6780.680 kilometers (km), 5061.674 km.

SECTION II: Conditions and Limitations

A. Operating and Emission Limitations

1. The AE/EC truck loading rack(s) shall be limited to a maximum throughput capacity of 183,960,000 gallons of product during any rolling 12-month time period (ARM 17.8.749).
2. EC production shall be limited to a maximum concentration of 35% number 2 fuel oil or 20% 142 solvent (ARM 17.8.749).
3. SemMaterials shall not use number 2 fuel oil and 142 solvent concurrently to produce EC (ARM 17.8.749).
4. The hot oil heater shall combust only pipeline quality natural gas (ARM 17.8.752).
5. At all times, SemMaterials shall, to the extent practicable, maintain and operate the asphalt product storage tanks and asphalt product loading racks in a manner consistent with good air pollution control practices for minimizing Volatile Organic Compound (VOC) emissions including, but not limited to, the maintenance of equipment seals, flanges, and gaskets, etc., as applicable (ARM 17.8.752).

6. SemMaterials shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
7. SemMaterials shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
8. SemMaterials shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.7 (ARM 17.8.749).
9. SemMaterials shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 CFR 60, Subpart Dc (ARM 17.8.340 and 40 CFR 60, Subpart Dc).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department of Environmental Quality (Department) may require testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. SemMaterials shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. SemMaterials shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by SemMaterials as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
4. SemMaterials shall document, by month, the product throughput for the AE/EC truck loading rack(s). By the 25th day of each month, SemMaterials shall total the product throughput for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.1. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
5. SemMaterials shall maintain EC production records monitoring compliance with the number 2 fuel oil and Solvent 142 concentration limitation(s) in Section II.A.2. The records shall be submitted to the Department upon request (ARM 17.8.749).

D. Notification

Within 15 days after completed installation of each AE storage tank proposed under Permit #3866-00, SemMaterials shall notify the Department of the date of completed installation (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – SemMaterials shall allow the Department’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if SemMaterials fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving SemMaterials of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department’s decision on the application is final 16 days after the Department’s decision is made.

- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by SemMaterials may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Permit Analysis
SemMaterials, L.P.
Permit #3866-00

I. Introduction/Process Description

SemMaterials, L.P. (SemMaterials), owns and operates an asphalt emulsion terminal. The terminal receives asphalt cement (AC) by truck and stores the AC in storage tanks. A variety of chemicals, including caustic and acids, are also stored in tanks. The chemicals are mixed in a batch tank to produce various types of soap, which are stored in soap tanks. The soaps are mixed with the AC in the AC mix tank, producing an asphalt emulsion (AE). AE is stored in tanks and loaded out to trucks at the truck loading rack. Trucks enter and leave the facility via unpaved plant roadways. Emulsion cutback (EC) with a diesel concentration up to 35% or Solvent 142 concentration up to 20% is produced at the facility and loaded-out directly to trucks via a loading rack. The material storage tanks are heated by a natural gas-fired thermal oil system with a maximum heat input capacity of 10.5 million British thermal units per hour (MMBtu/hr). Heat is transferred to the thermal oil, which is circulated to the tanks in order to maintain a minimum temperature requirement for the respective tank.

A. Permitted Equipment

A complete list of permitted equipment follows:

- 7 AC Storage Tanks
- 1 Asphalt Mix Tank
- 3 EC Storage Tanks
- 8 AE Storage Tanks
- 9 Chemical Storage Tanks
- 1 Number 2 Fuel Oil Tank
- 4 Soap Tanks
- 2 Water Tanks
- 1 Batch Tank
- 1 Injection Tank
- 1 Cook-Off Tank
- 1 Natural Gas-Fired Hot Oil Heater
- 1 AE/EC Truck Loading Rack
- 1 AC Truck Loading Rack
- Miscellaneous Support Equipment

Ancillary operations include equipment maintenance, non-halogenated solvent cleaning in remote reservoir parts washer, operation of a water softening system, small combustion sources (i.e., propane torches, diesel welders), sand blasting, painting, and a quality assurance/quality control laboratory.

B. Source Description

The SemMaterials facility is located at 7315 Mossmain Lane, Billings, Montana 59106. The legal description of the site is Section 1, Township 2 South, range 24 East, in Yellowstone County, Montana. The UTM Coordinates of the site are Zone 12, 6780.680 kilometers (km), 5061.674 km.

Primary terminal activities include receiving and storage of AC, asphalt additives, and number 2 fuel oil; production and storage of AE and EC; loading of trucks with AC, AE, and EC; operation of a natural gas-fired thermal oil heat transfer system; and associated cleaning and maintenance activities.

C. Current Permit Action

On October 31, 2006, during the public comment period for the Department of Environmental Quality's (Department) preliminary determination on Permit #3866-00, the Department received comments from SemMaterials. The comments received resulted in the following changes to the Department's preliminary determination under the Department's final decision on Permit #3866-00:

- Removal of Section II.D.1. The Department determined that notification of completed installation of the affected unit(s) rather than notification of commencement of construction and completed installation is appropriate in this case.
- Removal of Section II.D.3 and Section II.D.4. SemMaterials had previously installed the AC loading rack requiring notification of commencement of construction and completion of installation under Section II.D.3 and Section II.D.4, respectively. The installation was accomplished prior to the current permit action.
- Number 2 Fuel Oil Reference. The terms diesel fuel and number 2 fuel oil were used interchangeably in the preliminary determination. For the purpose of maintaining consistency throughout the permit, the Department changed all diesel fuel references to number 2 fuel oil.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

SemMaterials shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.213 Ambient Air Quality Standard for Ozone
5. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
6. ARM 17.8.221 Ambient Air Quality Standard for Visibility
7. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

SemMaterials must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter (PM). (2) Under this rule, SemMaterials shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). SemMaterials is an NSPS affected facility under 40 CFR 60 and is subject to the applicable requirements of the following subpart:

- 40 CFR 60, Subpart A, General Provisions. This subpart applies to all equipment or facilities subject to an NSPS.
- 40 CFR 60, Subpart Dc, Standard of Performance for Fossil Fuel-Fired Steam Generators. This subpart applies to the natural gas-fired hot oil heater because the affected unit has the capability of firing fossil fuel at a heat input rate of more than 10 million British thermal unit per hour (MMBtu/hr) but less than 100 MMBtu/hr and otherwise meets the definition of an affected unit under this subpart.

- D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. SemMaterials submitted the appropriate permit application fee of \$500 for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

- E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter, or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. SemMaterials has a PTE greater than 25 tons per year of Volatile Organic Compounds (VOCs); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. SemMaterials submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. SemMaterials submitted an affidavit of publication of public notice for the June 25, 2006, issue of *The Billings Gazette*, a newspaper of general circulation in the Town of Billings in Yellowstone County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving SemMaterials of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that

do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3866-00 for SemMaterials, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.

- d. This facility is subject to a current NSPS under 40 CFR 60, Subpart A and Subpart Dc.
- e. This facility is not subject to any current NESHAP standards.
- f. This source is not a Title IV affected source, nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that SemMaterials is a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, SemMaterials will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or altered source. SemMaterials shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT analysis was submitted by SemMaterials in Permit Application #3866-00, addressing some available methods of controlling VOC emissions from storage tanks and truck loading racks, and NO_x, CO, SO₂, VOC, and PM₁₀ emissions from the natural gas-fired hot oil heater. The Department reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the Department in order to make the following BACT determination.

A. VOC Emissions: AC, Asphalt Additives, Number 2 Fuel Oil, AE, and EC Storage Tanks

Introduction

The largest emitting storage tank at the SemMaterials facility is Tank 200, which will store EC. Potential VOC emissions from the tank are 1.84 tons per year (ton/yr), based on the permitted maximum allowable tank throughput of 183,960,000 gallons per year. Because Tank 200 has the highest potential to emit VOCs, for the purposes of this BACT analysis, Tank 200 will be representative of worst case impacts, control costs, and technical control feasibility for all facility asphalt product storage tanks.

The following available VOC emissions control strategies were analyzed and considered for the control of VOC emissions from the various SemMaterials asphalt product storage tanks:

1. Floating Roofs

Floating roof tanks (external or internal floaters) rely on an elastomeric seal that establishes contact between the roof and the inside surface of the tank shell. The floating roof rises and falls with varying fluid levels in the tank. The viscosity of asphalt products varies greatly as the temperature of the asphalt changes. At ambient temperatures asphalt is essentially a solid material.

The floating roof surface and the elastomeric seal would be exposed to ambient temperatures and the asphalt in this area (top of the tank in contact with the asphalt) would be highly viscous or solid. Therefore, movement of the floating roof could result in damage to the seal thereby compromising the emissions control infrastructure. Further, because the asphalt business is seasonal, storage tanks are typically unheated in the winter months, allowing the stored asphalt contents to solidify. Reheating a floating roof tank

could subject the tank to unbalanced forces as the volume of the asphalt increases substantially with the rise in temperature. The volume change (and forces) would not be evenly distributed during start-up of the heating process and, as a result, structural damage would be likely to occur. As a result of this, floating roofs for asphalt product storage tanks are not considered a technically feasible option for controlling VOC emissions from the storage tanks and are not considered BACT in this case.

2. Condensers

Another available VOC control device for asphalt product storage tanks is a condenser. Vent condensers would condense the tank vent streams using an air conditioning unit. A cost estimate of the total capital investment (TCI) and total annual costs (TAC) was conducted based on information obtained in a vendor quote for a tank vent condenser. The modeled condenser includes a 14,000 British thermal unit per hour (Btu/hr) capacity air conditioner designed to bring the vent stream down to 120°F. The estimated equipment costs for such a unit is approximately \$20,000. Using this figure and estimating procedures contained in the Environmental Protection Agency's (EPA) "OAQPS Cost Control Manual" the TCI and TAC were estimated as follows:

Total Capital Investment	
Purchased Equipment Costs	\$20,000
Installation Costs	\$3,000
Total Annual Costs – Direct Costs	
Operator Costs	\$8,213
Supervisor Costs	\$1,232
Maintenance Costs	\$8,213
Maintenance Material	\$8,213
Electricity	\$841
Total Annual Costs – Indirect Costs	
Overhead Costs	\$15,552
Administrative Costs	\$249
Property Taxes	\$125
Insurance	\$125
Capital Recovery Costs	\$1,368
Total Annual Costs	\$44,101

As previously stated, the highest VOC emitting tank (Tank 200) has the potential to emit 1.84 ton/yr of VOCs. The annual cost of the vent condenser unit for a single tank is \$44,101 for the life of the equipment, which is assumed to be 15 years. The estimated VOC control efficiency for the system is approximately 30-35%, thereby reducing VOC emissions from Tank 200 by approximately 0.64 ton/yr to approximately 1.20 ton VOC/yr. This amounts to an annual control cost effectiveness of approximately \$68,908 per ton of VOC removed. Based on this information, the Department determined that vent condensers for the control of VOCs from the affected tanks is cost prohibitive and do not constitute BACT in this case.

3. Flares

Flares are often used to control VOC emissions streams from various processes including storage tanks. However, flares function best if the vent stream has a high heating value so that little or no assist gas is required for proper flaring.

The VOC vent stream for the highest VOC emitting tank is relatively low with a potential to emit 1.84 ton/yr. Further, the affected vent streams do not have high heating values. Therefore, destruction of the vent stream would necessitate the combustion of relatively significant amounts of natural gas assist fuel. Combustion of assist gas would be costly considering the price of natural gas, but would also result in the generation of additional pollutants, such as a significant increase in NO_x emissions from the continuous combustion of the natural gas. Based on this information, the Department determined that the environmental benefit gained from a small reduction in VOC emissions (1.82 ton/yr assuming 99% from the highest VOC emitting tank) would be offset by the increase in NO_x emissions. Therefore, the Department determined that tank flares do not constitute BACT in this case.

4. No Additional Control

This practice would consist of operating the asphalt product storage tanks without any add-on VOC pollution control equipment. Operation of the affected units with no additional controls is a technically feasible option for the storage of asphalt products in tanks, as proposed by SemMaterials. This approach would result in no additional technical, energy, or economic impacts.

VOC BACT Summary: AC, Asphalt Additives, Number 2 Fuel Oil, AE, and EC Storage Tanks

In summary, after consideration of all potential impacts including energy impacts, impacts to the environment, and economic impacts and other costs, the Department determined that no additional control constitutes BACT for the control of VOCs from asphalt product storage tanks, in this case. Further, SemMaterials shall maintain and operate the affected storage tanks in a manner consistent with good air pollution control practices for minimizing VOC emissions including, but not limited to, the maintenance of equipment seals, flanges, and gaskets, etc., as applicable.

B. VOC Emissions: Asphalt Cement, Asphalt Emulsion, and Emulsion Cutback Loading Racks

Introduction

The AC, AE, and EC loading racks are potential sources of VOC emissions. The AC loading rack has the potential to emit 3.51 ton VOC/yr, while the AE/EC loading rack has the potential to emit 11.10 ton VOC/yr. The potential to emit is based on the permitted allowable throughput of 183,960 gallons of product (AC, AE, EC) per year.

The following available VOC emissions control strategies were analyzed and considered for the control of VOC emissions from the affected loading racks:

1. Condensers

Condensers are an available VOC control strategy for the loading racks. However, for reasons similar to those discussed previously under the storage tanks BACT analysis, condensers are not economically feasible for the control of VOCs from the affected loading racks. Using the same condenser system modeled for the storage tanks above, the annual cost-effective value for VOC control from the affected loading racks would be approximately \$35,854/ton of VOC removed from the AC loading rack, \$11,366/ton of VOC removed from the AE/EC loading rack. These costs are based on an assumed 35% VOC control efficiency. As with the storage tanks, a higher control efficiency system would be more costly as it would need to be a larger unit. In addition, the collection system would be more costly because the trucks are top-loaded and a collection system for top-loading trucks would be more technically complex.

Based on this information, the Department determined that vent condensers for the control of VOCs from the affected loading racks is cost prohibitive and does not constitute BACT in this case.

2. Flares

Flares are not considered a technically feasible VOC control option for the loading racks for the same reasons discussed previously for the storage tanks. The VOC stream from the loading racks does not have a high heating value; therefore, relatively large volumes of assist gas would be required to obtain high flaring VOC destruction efficiencies. In addition, as a result of combusting large amounts of assist fuel (natural gas), NO_x and other regulated pollutant emissions would be increased thereby offsetting any environmental gain from the destruction of VOC emissions. Further, as with the condenser discussed above, the flare collection system would be more complex due to the nature of top-loading operations. Based on this information, due to environmental and technical impacts associated with flare control of VOCs from the affected loading racks, the Department determined that flares do not constitute BACT in this case.

3. No Additional Control

This practice would consist of operating the asphalt product loading racks without any add-on VOC pollution control equipment. Operation of the affected units with no additional controls is a technically feasible option for the load-out of asphalt products from the racks, as proposed by SemMaterials. This approach would result in no additional technical, energy, or economic impacts.

VOC BACT Summary: AE/EC Loading Racks

In summary, after consideration of all potential impacts including energy impacts, impacts to the environment, and economic impacts and other costs, the Department determined that no additional control constitutes BACT for the control of VOCs from the asphalt product loading racks, in this case. Further, SemMaterials shall maintain and operate the affected loading racks in a manner consistent with good air pollution control practices for minimizing VOC emissions including, but not limited to, the maintenance of equipment seals, flanges, and gaskets, etc., as applicable.

C. NO_x and CO Emissions: Hot Oil Heater

Natural gas fired heaters are inherently low emitters of air pollution due to characteristics of the natural gas fuel fired to operate the boiler. Potential NO_x and CO emissions from the Hot Oil Heater are 4.51 tons/yr and 3.79 ton/yr, respectively, while potential emissions of all other regulated pollutants are less than 1 tpy. Because potential emissions of all regulated pollutants are low, incorporation of available pollutant-specific control technologies, such as an ultra low-NO_x burner to control NO_x and CO emissions, would result in high cost-effective (\$/ton removed) values thereby making pollutant-specific add-on controls for NO_x, CO, SO₂, PM/PM₁₀ and VOCs economically infeasible in this case. Therefore, the Department determined that combustion of pipeline quality natural gas only and proper operation and maintenance of the Hot Oil Heater with no additional control constitutes BACT for all regulated pollutants, in this case.

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

IV. Emission Inventory

Emissions Inventory – Facility Producing Emulsion Cutback with Up To 35% Number 2 Fuel Oil							
Emitting Unit	NO_x	CO	PM/PM₁₀	VOC	SO₂	Pb	HAPs
Hot Oil Heater	4.51	3.79	0.34	0.25	0.03	2.25E-05	0.09
All Storage Tanks	---	---	---	15.52	---	---	0.20
Truck Loading Fugitives	---	---	---	19.01	---	---	0.28
Haul Road Fugitives	---	---	9.76	---	---	---	---
Equipment Fugitives	---	---	---	0.07	---	---	1.07E-03
Plant-Wide Total	4.51	3.79	10.10	34.85	0.03	2.25E-05	5.71E-01
<ul style="list-style-type: none"> • Emissions estimates expressed in tons of pollutant per year • A complete emission inventory for Permit #3866-00 is on file with the Department 							

Emissions Inventory – Facility Producing Emulsion Cutback with Up To 20% Solvent 142							
Emitting Unit	NO_x	CO	PM/PM₁₀	VOC	SO₂	Pb	HAPs
Hot Oil Heater	4.51	3.79	0.34	0.25	0.03	2.25E-05	0.09
All Storage Tanks	---	---	---	17.18	---	---	0.22
Truck Loading Fugitives	---	---	---	22.64	---	---	0.33
Haul Road Fugitives	---	---	9.19	---	---	---	---
Equipment Fugitives	---	---	---	0.07	---	---	1.07E-03
Plant-Wide Total	4.51	3.79	9.53	40.14	0.03	2.25E-05	6.41E-01
<ul style="list-style-type: none"> • Emissions estimates expressed in tons of pollutant per year • A complete emission inventory for Permit #3866-00 is on file with the Department 							

V. Existing Air Quality

The SemMaterials facility is located at 7315 Mossmain Lane, Billings, Montana 59106. The legal description of the site is Section 1, Township 2 South, range 24 East, in Yellowstone County, Montana. The UTM Coordinates of the site are Zone 12, 6780.680 kilometers (km), 5061.674 km. The Billings area is currently under a SIP-call action through the Federal Clean Air Act authority Section 110(k)(5). The SIP-call area is not considered a “non-attainment” area, but does have a regulatory control plan for SO₂. Existing and major new sources of SO₂ locating in the Billings area are regulated under the Billings SO₂ SIP. In the view of the Department, the amount of controlled emissions, including SO₂, from this facility will not cause an exceedance of any ambient air quality standard.

VI. Ambient Air Impact Analysis

Based on the relatively low levels of pollutants emitted from the SemMaterials facility, the Department determined that ambient air impacts from this permitting action will be minor. The Department believes the facility, operating under the limits and conditions included in this permit, will not cause or contribute to a violation of any applicable ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: SemMaterials, L.P.
Billings Emulsion Plant
7315 Mossmain Lane
Billings, MT 59106

Air Quality Permit Number: 3866-00

Preliminary Determination Issued: October 16, 2006

Department Decision Issued: November 1, 2006

Permit Final: November 17, 2006

1. *Legal Description of Site:* The legal description of the SemMaterials, site is Section 1, Township 2 South, range 24 East, in Yellowstone County, Montana. The UTM Coordinates of the site are Zone 12, 6780.680 kilometers (km), 5061.674 km.
2. *Description of Project:* SemMaterials owns and operates an existing asphalt emulsion terminal. Primary terminal activities include receiving and storage of AC, asphalt additives, and number 2 fuel oil; production and storage of AE and EC; loading of trucks with AC, AE, and EC; operation of a thermal oil heat transfer system; and associated cleaning and maintenance activities. A complete list of permitted equipment would be contained in Section I of the permit analysis to Permit #3866-00. Under the current permit action SemMaterials would increase number 2 fuel oil concentration (up to 35%) and Solvent 142 concentration (up to 20%) in the production of EC produced at the facility; would install and operate two new AE storage tanks; and would install and operate a new AC loading rack. The modified EC production scenario would result in an increase in potential VOC emissions to a level greater than the Montana Air Quality Permit threshold of 25 tons per year of any regulated pollutant; therefore, the facility would require an air quality permit.
3. *Objectives of Project:* Provide operational flexibility to allow for increased number 2 fuel oil concentration (up to 35%) and Solvent 142 concentration (up to 20%) in the production of EC product; installation and operation of two new AE storage tanks; and installation and operation of a new AC loading rack. The ultimate objective of the project is to increase business and revenue for the company through obtaining the required Montana Air Quality Permit.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because SemMaterials demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in Permit #3866-00.

6. *Regulatory Effects on Private Property*: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.
7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			X			Yes
B	Water Quality, Quantity, and Distribution			X			Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites				X		Yes
J	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic life and Habitats:

Emissions from the project would affect terrestrial and aquatic life and habitats in the proposed project area. However, as discussed in Section VI of the permit analysis, any emissions and resulting impacts from the project would be minor due to the low level of those pollutants emitted.

Further, the plant is an existing facility and only minor new construction activities would occur as a result of the current permit action. Overall, any impact to the terrestrial and aquatic life and habitats of the proposed project area would be minor.

B. Water Quality, Quantity and Distribution:

Emissions from the proposed project would result in minor negative impacts to water quality in the proposed project area. However, as discussed in Section VI of the permit analysis any emissions and resulting deposition impacts from the project would be minor due to the low level of those pollutants emitted.

Further, the plant is an existing facility and no new water use would occur as a result of the current permit action. Overall, any impact to the water quality, quantity, and distribution in the proposed project area would be minor and generally beneficial.

C. Geology and Soil Quality, Stability, and Moisture:

The project would result in only minor impacts the geology, soil quality, stability, and moisture of the proposed project area. The plant is an existing facility and only minor new construction or ground disturbance to the area would occur as a result of the current permit action.

Further, as discussed in Section VI of the permit analysis, the plant would result in minor air pollution emissions to the outside ambient environment. These pollutants would deposit on the soils in the surrounding area. Any impact from deposition of these pollutants would be minor and typical due to the existing industrial nature of the area and the low level of those pollutants emitted. Overall, any impact to the geology and soil quality, stability, and moisture of the proposed project area would be minor.

D. Vegetation Cover, Quantity, and Quality:

The project would result in minor impacts to the vegetation cover, quantity, and quality in the proposed project area. The plant is an existing facility and only minor new construction or ground disturbance to the area would occur as a result of the current permit action.

Further, as discussed in Section VI of the permit analysis, the plant would result in minor air pollution emissions to the outside ambient environment. These pollutants would deposit on the vegetation in the surrounding area. Any impact from deposition of these pollutants would be minor and typical due to the existing industrial nature of the area and the low level of those pollutants emitted. Overall, any impact to the vegetation cover, quantity, and quality of the proposed project area would be minor.

E. Aesthetics:

The project would result in minor impacts to the aesthetic nature of the proposed project area because the plant would operate within an existing industrial area and only minor new construction or further site disturbance would be required for the project. Because the plant is an existing facility located in an area zoned for industrial uses, the project would not change the aesthetic nature of the area. Further, visible emissions from the source would be limited to 20% opacity and the permit would include emission control requirements. Also, the project would not result in excess noise from normal operations. Overall, any impact to the aesthetic character of the proposed project area would be minor.

F. Air Quality:

The proposed project would result in the emission of various air pollutants to the ambient air in the proposed project area. However, based on the relatively low levels of pollutants emitted from the existing facility and proposed changes to the plant, the Department determined that ambient air impacts from this permitting action would be minor. The Department determined that the facility, operating under the limits and conditions included in this permit would not cause or contribute to a violation of any applicable ambient air quality standard. Overall, any impact to the air quality of the proposed project area would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources:

Emissions from the proposed project would affect unique, endangered, fragile, or limited environmental resources located in the proposed project area. However, as detailed in Section V and Section VI of the permit analysis, any emissions and resulting impacts from the project would be minor due to the low concentration of those pollutants emitted.

Further, the proposed project would occur at an existing facility located within an existing industrial area, so the limited amount of construction and operating disturbance required for the project would not change the typical character of the area. Overall, any impact to any existing unique, endangered, fragile, or limited environmental resources in the proposed project area would be minor.

H. Demands on Environmental Resource of Water, Air, and Energy:

The project would result in minor demands on environmental resources of water as discussed in Section 7.B of this EA. In addition, the proposed project would occur at an existing industrial facility and only minor changes to the existing industrial process would occur. Therefore, the project would impact energy resources; however, any impacts would be minor due to the relatively small size of the industrial operations and the relatively minor changes to the existing facility under the current permit action.

Further, as discussed in Section VI of the permit analysis, the plant would result in minor air pollution emissions to the outside ambient environment. Any impact from the emission of these pollutants would be minor and typical due to the existing industrial nature of the area and the low level of those pollutants emitted. Overall, any impact to the demands on environmental resource of water, air, and energy in the proposed project area would be minor.

I. Historical and Archaeological Sites:

The proposed project would not result in any impacts to historical and archaeological sites in the proposed project area. The plant would operate within an existing industrial area and would require only a minor amount of additional construction and ground disturbance.

According to previous correspondence from the Montana State Historic Preservation Office, there is low likelihood of any disturbance to any known archaeological or historic site, given previous industrial disturbance within the area. Therefore, the project would not impact any known historic or archaeological site that may be located within or near the proposed operating site.

J. Cumulative and Secondary Impacts:

The proposed project would allow for minor modifications to existing facility operations. Overall, the cumulative and secondary impacts from this project on the physical and biological environment in the immediate area would be minor due to the relatively small size and potential environmental impact of the proposed project. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in Permit #3866-00.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production				X		Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities				X		Yes
G	Quantity and Distribution of Employment				X		Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity			X			Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The Department has prepared the following comments.

- A. Social Structures and Mores:
B. Cultural Uniqueness and Diversity:

The proposed project would not have any impact on the above economic and social resources of the proposed area of operation because the project is small by industrial standards and the proposed project would take place within an existing facility located within an existing industrial site and only minor additional construction and no new employment would be required for normal operations. The predominant use of the surrounding area would not change as a result of the proposed project.

- C. Local and State Tax Base and Tax Revenue:

The proposed project would have a minor impact on the local and state tax base and tax revenue because the project is small by industrial standards and would not result in any increased commercial activity beyond the proposed project. Further, the plant would operate within an existing industrial site with only a minor amount of new construction or ground disturbance occurring as a result of the current permit action.

- D. Agricultural or Industrial Production:

The proposed project would operate within an existing industrial area; therefore, the project would not affect or displace any land used for agricultural production. Further, because the current action would require only a minor amount of additional industrial construction and the facility is an existing industrial operation, it is unlikely that the project would impact any industrial production.

- E. Human Health:

Permit #3866-00 would include limits and conditions to ensure the facility would be operated in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section III of the permit analysis, the air

emissions from the proposed facility would be minimized by the use of BACT as required by Permit #3866-00. Overall, only minor impacts would be expected on human health from the proposed operations.

F. Access to and Quality of Recreational and Wilderness Activities:

Because the proposed project would operate within an existing industrial area, the project would not affect any access to or quality of any recreation or wilderness activities in the area.

G. Quantity and Distribution of Employment:

H. Distribution of Population:

The proposed project would not require any new employment in the area. The project would utilize existing employee(s) to operate the plant; therefore, the proposed project would not impact the quantity and distribution of population and employment in the area.

I. Demands for Government Services:

Government services would be required for acquiring the appropriate permits from government agencies. In addition, the permitted source of emissions would be subject to periodic inspections by government personnel. Demands for government services would be minor.

J. Industrial and Commercial Activity:

The proposed project would result in only a minor impact on local industrial and commercial activity because the proposed project would operate within an existing industrial area, would require only a minor amount of additional industrial construction, and would not result in additional industrial production. Overall, any industrial or commercial activity occurring as a result of the project would be minor.

K. Locally Adopted Environmental Plans and Goals:

The Billings area is currently under a SIP-call action through the Federal Clean Air Act authority Section 110(k)(5). The SIP-call area is not considered a “non-attainment” area, but does have a regulatory control plan for SO₂. Existing and major new sources of SO₂ locating in the Billings area are regulated under the Billings SO₂ SIP. In the view of the Department, the amount of controlled emissions from this relatively minor source of emissions would not cause or contribute to an exceedance of any ambient air quality standard.

The Department is not aware of any other locally adopted environmental plans or goals in the immediate area affected by the proposed project. The state standards would be protective of the proposed project area.

L. Cumulative and Secondary Impacts:

The proposed project would allow for minor modifications to existing facility operations. Overall, the cumulative and secondary impacts from this project on the human environment in the immediate area would be minor due to the relatively small size and potential environmental impact of the proposed project. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in Permit #3866-00.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permit action is for the operation of an asphalt products manufacturing plant. Permit #3866-00 would include conditions and limitations to ensure the facility would operate in compliance with all applicable rules and regulations. In addition, as detailed in the above EA there are no significant impacts associated with the proposed project.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program.

EA prepared by: M. Eric Merchant, MPH

Date: October 5, 2006